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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/697,262	10/26/2000	Dirk Daecke	P00,1843	3837
7590	06/30/2005		EXAMINER	
SCHIFF, HARDIN & WAITE Patent Department 6600 Sears Tower- 233 South Wacker Drive Chicago, IL 60606			ELALLAM, AHMED	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/697,262	DAECKE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	AHMED ELALLAM	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 21 April 2005.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-14 and 16-21 is/are pending in the application.  
4a) Of the above claim(s) 17-21 is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-14 and 16 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_.  
\_\_\_\_\_

**DETAILED ACTION**

This office action is responsive to RCA filed on April 21, 2004.

Claims 1-14 and 16 are pending.

1. Newly submitted claims 17-21 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Claims 17-21 have different scope of the originally presented claims 1-16. More specifically, new independent claim 17 specify an ISDN specific eoc as an SDLS eoc that is no part of the payload and is not multiplexed into time slots, New independent claim 18 specify the provisioning of a common overhead infrastructure that includes synchronization and eoc signaling channel for a SDSL frame and the assignment of a logic eoc channels between terminals is made via addressing, in addition to the SDSL synchronization clock, and new independent claim 19 specify the creation of SDSL sub-block that comprise an ISDN B-channel, and ISDN D-channel, and the combining of the SDSL sub-blocks with SDSL overhead into an SDSL payload block. These limitations do not have the same scope the previously presented claims.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 17-21 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Objections***

2. Claim 9 is objected to because of the following informalities:

In claim 9, the claimed "said terminal equipment" should be "said terminal equipment types or services".

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-8, 14 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Bartholomew et al, US (6,400,708).

Regarding claim 1, with reference to figures 1-3, Bartholomew discloses a circuit arrangement (Fig. 2) comprising:

- channel bank 31 for inserting data belonging to terminal equipment 29 (telephone) and 25 (computer), Bartholomew further discloses ISDN frame for concurrent voice and data, see column 1, lines 39-49, and column 9, lines 3-20. (Claimed transmission unit for inserting data belonging to at least two terminal equipment types or services that are capable of including both voice and data in a frame having a frame length);
- the channel bank comprising a Multiplexer/Demultiplexer 75 for inserting data of the terminal equipment (telephone 29 and computer 25) , and using DS0

slots for transport over a T1 line, see column 12, lines 60-67 and column 13, lines 1-31. (Claimed insertion mechanism for inserting the data of the at least two terminal equipment types, the data of all terminal equipment types being synchronously inserted into the frame and transmitted with a digital time-division multiple access technique).

Regarding claim 2, with reference to figures 1-3, Bartholomew discloses a circuit arrangement (Fig. 2) comprising:

- channel bank 31 for dividing a data stream transmitted in a frame by a multiplexer 81 (Fig. 2) to a terminal equipment 29, 25, (claimed a reception unit for dividing a data stream transmitted in a frame, the frame comprising data belonging to at least two terminal equipment types or services that are capable of including both voice and data, by a transmitter to at least one terminal equipment of the at least two equipment types);
- the channel bank comprising a Multiplexer/Demultiplexer 75 (claimed switch module) for demultiplexing the data stream received to its destined terminal equipment (29, 25), wherein the EOC (embedded operations channel) is used for control (claimed control data); see column 11, lines 63-67; column 12, lines 1-19, lines 60-67 and column 13, lines 1-31. (Claimed a switch module for a purpose-conforming division of data stream transmitted in the frame, in which a further division onto further terminal equipment types or services is undertaken based on control data).

Regarding claim 3, Bartholomew discloses a circuit arrangement (Fig. 2) comprising a transmission reception as indicated in claim 1 and reception unit as indicated in claim 2.

Regarding claims 4 and 16, with reference to figures 1-3, Bartholomew discloses a method in a circuit arrangement (Fig. 2) for ("synchronously" as in claim 16) transmitting a data stream in a frame belonging to at least two terminal equipment types or services that are capable of including both voice and data, comprising:

channel bank 31 (claimed first unit) for inserting data belonging to terminal equipment 29 and 25, the channel bank comprising a Multiplexer/Demultiplexer 75 for inserting data of the terminal equipment (telephone 29 and computer 25), and using DS0 slots for transport over a T1 line to a channel bank 39, (claimed second unit) see column 12, lines 60-67 and column 13, lines 1-31, Bartholomew further discloses ISDN frame for concurrent voice and data, see column 1, lines 39-49, and column 9, lines 3-20. (Claimed synchronously inserting data of at least two terminal equipment types or services into the frame in a first unit, and transmitting the data to a second unit with a time-division multiplex method);

wherein the channel bank 39 (second unit) has a Multiplexer/demultiplexer 81 for dividing data stream (T1) to terminal devices of terminal equipment 3, 7 (Figure 1). (claimed dividing data stream in said frame to terminal devices of at least one terminal equipment type in the second unit).

Regarding claim 5 and 6, Bartholomew discloses using ISDN (Integrated Services Digital Network) in which an EOC (embedded operations channel) channel is

used, and that two of time slots transport the two bearer (B) channels, the other slot transports the embedded operations channel (EOC) and the data (D) channel for the one subscriber's ISDN service (2B +D channels). See column 10, lines 48-56, column 14, lines 16-31, column 15, lines 59-67 and column 16, lines 1-12. (Examiner interpreted the oec for control of both the 2B channel (connection and part of D channel (connection) as being the claimed depositing data for operational control of connections to which at least two terminal equipment types or services that are capable of including both voice and data are connected in a single operating eoc channel of the frame as in claim 5 and connections are ISDN connections as in claim 6).

Regarding claim 7, Bartholomew discloses with reference to figure 1, that a customer at premises CP-3 can use two DS0 for fractional T1 access for data services, see column 10, lines 9-23.

Regarding claim 8, with reference to figure 1, Bartholomew shows a plurality of terminal equipments 13, 17, 19, 25 connected to the channel bank 31. (Claimed connecting a plurality of terminal equipment of at least one terminal type to a transmission-reception unit).

Regarding claim 14, the channel bank 35 (second unit) of Bartholomew can be regarded as a network termination unit, and the first unit as a network node.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2662

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartholomew in view of Tzannes et al, US (6,522,666).

Regarding claims 9 and 10, Bartholomew discloses substantially all the limitations of base claim 4, in addition as discussed above with reference to claim 5, Bartholomew discloses the use of a single eoc channel for controlling both concurrent data and voice, however Bartholomew does not explicitly disclose providing bits for operational control in data belonging to the terminal equipment types or services and arranging bits outside of a payload data region provided for the terminal equipment.

However, Tzannes discloses in the same field of endeavor, providing bits for operational control in data belonging to a terminal equipment type and arranging bits outside of a payload data region provided for the terminal equipment in a frame format. See column 3, lines 14-44.

Therefore, it would have been obvious to an ordinary person of skill in the art, at the time the invention was made to implement the EOC overhead method taught by Tzannes in Bartholomew system so that communication of concurrent voice and data by the terminal equipments of Bartholomew can be provided using ISDN digital subscriber lines standards.

Regarding claim 11, as indicated above with reference to claim 10, Bartholomew discloses providing bits for operational control in data belonging to a terminal equipment type (claimed allocating bits for operational control to an operating eoc channel, and

that the eoc is embedded in a portion of the overhead channel in accordance with the established standards. (Examiner interpreted the portion of the overhead channel of having the eoc bits as being the claimed addressing the bits for operational control via a sub-address in a message format of the operating channel).

5. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartholomew.

Regarding claim 12, while Bartholomew discloses ISDN connections in a frame as indicated above with reference to claim 4, it does not specify that the frame is a symmetric digital subscriber line frame.

However, symmetric digital subscriber line framing is a standard well known in the art. It would have been obvious to an ordinary person of skill in the art, at the time the invention was made to implement the method of Bartholomew of ISDN connections using the well known SDSL (Symmetric Digital Subscriber Line) framing technique so that high rate ISDN DSL (Integrated Services Digital Network Digital Subscriber Line) (IDSL) can be implemented over a single copper line. The advantage would be the ability to provide rate adaptation that the SDLS standard provides

Regarding claim 13. Bartholomew discloses substantially all the limitations of base claim 4, except it does not disclose that the frame is symmetric digital subscriber line frame for carrying a plurality of traditional telephony connections.

However, symmetric digital subscriber line frame is well established standard, it would have been obvious to an ordinary person of skill in the art, at the time the

invention was made to implement the traditional voice telephony of Bartholomew using the known SDSL frames so that advantage can be taken of the high bit rates that the SDSL along with the advantage of rate adaptation that the standard provides.

### ***Response to Arguments***

6. Applicant's arguments filed April 25, 2004 have been fully considered but they are not persuasive.

The rejection of claims 1, 3-14 and 16 under rejected under 35 U.S.C. 112, first paragraph of having new matter is withdrawn in view of the amendment.

Applicants argue on page 9, that the invention as claimed in claims 1, 2, 4 and 16, comprise "*the payload (e.g. ISDN or voice) and SDSL transport mechanism are synchronous*". (emphasis added). Examiner disagrees, because none of those alleged feature are presented in claims 1, 2, 4 and 16.

With regard to claims 5 and 9, Applicants argue that Bartholomew discloses that "*each service and the transport medium have their own eocs which are realized as a separate bit streams. The EOCs of the voice service are carried separate in the payload, whereas the control according to present claims as amended, utilizes an embedded operating channel that is distinguished from that of Bartholomew*". Examiner disagrees, because the claims as amended do not overcome the teaching of Bartholomew. More specifically, Bartholomew discloses using ISDN (Integrated Services Digital Network) in which an EOC channel is used, and that two of time slots transport the two bearer (B) channels, the other slot transports the embedded

operations channel (EOC) and the data (D) channel for the one subscriber's ISDN service (2B +D channels). See column 10, lines 48-56, column 14, lines 16-31, column 15, lines 59-67 and column 16, lines 1-12. The fact that the control of both the 2B channels and the D channels (data and voice respectively) by the same oec portion of the overhead data can be interpreted to read on the argued "*only one eoc for voice services and the transmit medium*". It is noted that the terminology of "SDSL frame" used to overcome Bartholomew teaching is not present in claims 5 and 9, moreover Examiner interpreted SDSL frame to mean symmetric DSL frame as indicated in claim 12.

On page 10, Applicants argue that *Bartholomew uses ISDN frame format to transmit 64 kbits/s data services and 16 kbits/s compressed voice data, and that "the payload is not an ISDN payload", and therefore Bartholomew "not able to deliver ISDN service*". Examiner respectfully disagrees, Applicants didn't explain why the payload of Bartholomew is not an ISDN payload however contrary to Applicants assumptions, Examiner asserts that the payload of Bartholomew are ISDN payload since the two B and D channels are used in the transmission both data and voice using an ISDN frame format.

Applicants argue on page 11 that the inventive link exemplified by an SDLS link is synchronous as in claims 1, 4, 14 and 15. Examiner notes that an SDLS link is not recited in any of claims 1, 4, 14 and 15, and the SDSL is interpreted to mean symmetric DSL as indicated in claim 12. However, the feature of "synchronous" in these claims is regarded as equivalent to Bartholomew's voice and data transmissions carried in isdn frame, because it is known that DSL frames have certain number of time slots in with

data/ or voice can be inserted in synchrony with respect to a framing clock, so that the frame repeat every period (the period subject to standards in most of time) in order for data/and voice data to be inserted into the assigned time slots, it is in this regard that the claimed “**synchronous**” limitation has been interpreted by the Examiner. Applicants are encouraged to give more details about the claimed “synchronous” feature if they believe that is different from Examiner interpretation.

Applicant’s argument with regard to claims 9-11 is similar to that of claims 5 and 9, similar remarks by the Examiner apply as indicated above with reference to claim 5, Applicants added that Bartholomew discloses voice specific signaling transmitted in a D channel inside the payload region, to overcome the deficiency Examiner relied upon the Tzannes reference as indicated above.

Applicants’ argument in pages 13 and 14 is considered by the Examiner, however it appears such argument is related to the new set of claims 17-21. Since these claims were subject to a restriction, no response is provided herewith with respect to these claims.

Examiner believes, given the broadest reasonable interpretation of claim limitations, the rejection above is proper.

### ***Conclusion***

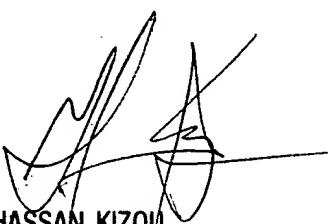
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Wegleitner et al, US (6,480,487); Brown et al, US (6,747,995); Rawson et al , US (6,853,657), and Palm, US 2005/0129103.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AHMED ELALLAM whose telephone number is (571) 272-3097. The examiner can normally be reached on 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kizou Hassan can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AHMED ELALLAM  
Examiner  
Art Unit 2662  
24 June 2005



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